THE CALIFORNIA VETERINARIAN

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1. Kafka, H.: N. Am. Vet. 32:826 (Dec.) 1951.

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THE CALIFORNIA VETERINARIAN

MARCH-APRIL, 1952

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Volume 5 **Number 4**

Published Bi-Monthly by the California State Veterinary Medical Association, 3004 16th Street, San Francisco 3, California. Devoted to promote Veterinary Science, to increase the esteem of the general public for the veterinarian, to protect his rights and privileges and to elevate the standard of the profession generally in scientific intercourse. Address all communications to The California State Veterinary Medical Association, Charles S. Travers, Executive Secretary. Please notify us immediately of incorrect address or change of address.

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SMALL ANIMAL DEPARTMENT

Use Of The Hematocrit In Canine Practice*

By O. W. SCHALM, D.V.M., Ph.D., and MARGARET WOOD, B.S., *Division of Clinical Pathology, School of Veterinary Medicine, University of California, Davis, California*

The blood is in direct or indirect contact with every living cell of the animal body and serves to carry nutrient substances to the tissue cells and to receive the waste products which they discharge into it. In the transporting stream, these nutrients and waste products become an integral part of the blood, and through morphological, physical and chemical studies on animals in health, data have been developed which are representative for each of the many blood components.

A disease state caused either by a foreign agent or by organic derangement will alter the composition of the blood. Changes may be produced in the number and morphology of the cellular elements and the various chemical components may be increased or decreased. Minor or limited pathologic states may not produce changes of sufficient magnitude to exceed the ranges representative of the normal for the species but, if the normal for the individual animal in question is known, such minor changes may be significant. Acute and chronic diseases, however, often produce shifts of sufficient magnitude to be detectable by simple laboratory procedures.

Blood studies should not be limited to the difficult or occult cases. The routine use of hematological technics will reveal unsuspected derangements and in the many instances where the blood is found to be normal, such knowledge is of equal value. It should be realized that a specific diagnosis can seldom be made from laboratory findings alone. The information, however, often aids in making a more critical diagnosis, in establishing a prognosis, and in being useful to plan treatment. In cases exhibiting an abnormal blood picture, additional blood examinations during the course of treatment will indicate the progress being made.

A large number of tests are available for the study of the blood. For routine screening of cases, the estimation of red and white cell numbers, cell morphology and hemoglobin concentration are adequate. The morphology of erythrocytes and leukocytes is determined from a blood film stained by Wright's method. The counting of the red and white cells is done with the aid of special blood diluting pipettes and a counting chamber viewed through the compound microscope. The hemoglobin determination is a chemical procedure for which a number of methods are available. While these represent the minimum tests for routine study of blood, their execution is time consuming and requires considerable skill. No substitute is available for shortening the time required to prepare and examine a blood film for cell types and morphology, but considerable time can be saved by adopting the hematocrit test to provide presumptive information on red and white cell numbers, and on hemoglobin concentration. In addition, the sedimentation rate of erythrocytes and icterus index may be determined on the same sample.

The Wintrobe hematocrit tube has a uniform three millimeter bore and is calibrated by a double 10 centimeter scale divided in millimeters. A capillary pipette having a long narrow delivery tip is employed to fill the tube to the 10 cm. mark. This requires about 1 ml. of blood containing an anticoagulant. Some anticoagulants cause the red cells to shrink and this in turn will introduce an error. Heller and Paul's preparation does not cause distortion of the erythrocytes and is, therefore, the anticoagulant of choice. The formula is as follows: 0.8 gram of potassium oxalate and 1.2 grams of ammonium oxalate are dissolved in 100 ml. of distilled water, and this anticoagulant solution is distributed into shell vials at the rate of 0.1 ml. for each 1 ml. of blood to be drawn. Since a liquid will introduce a change in blood volume the anticoagulant should be evaporated to dryness before the vials are used.

The hematocrit tube should be filled within the hour to avoid errors due to aging of the blood. Before removing the blood from the vial, for transfer to the hematocrit, it is important to obtain uniform distribution of the cellular elements. Inverting the vial about 20 times will produce adequate mixing. If the cork has been coated with paraffin, adherence of blood to the cork and leakage of blood from the vial during agitation are reduced.

Sedimentation of Erythrocytes: The erythrocytes of the horse, pig, dog, cat, and man show a natural tendency to settle in drawn blood; whereas, those of the cow, sheep and goat remain in suspension. The distance of fall in millimeters in one hour in the hematocrit tube is called the sedimentation rate. In the animals showing some natural settling of erythrocytes, the rate of sedimentation is increased in inflammatory diseases, in the presence of malignant neoplasms and in the anemias. There is a direct relationship between the speed of sedimentation of the erythrocytes and the intensity or gravity of the disease process. Thus, the sedimentation rate becomes a prognostic aid. In animals not show-

*Presented Jan. 29, 1952, at the annual midwinter conference of the CSVMA.

ing a normal settling of red blood cells, no tendency for an increased sedimentation rate appears in disease.

Temperature and position of the hematocrit tube influence the rate of sedimentation. The test should be conducted at room temperature and the tube should be placed in a rack in a vertical position. The rate of fall is also affected by the number of red cells. The fewer the erythrocytes the faster the rate of fall. Thus the sedimentation rate is increased in anemic conditions. It is important, therefore, to correct the rate of fall to a standard erythrocyte number or red cell volume in order to cancel out any influence of anemia or hemoconcentration. Wintrobe and Lansberg have developed a correction chart for use with human blood which also has proven to be satisfactory for use with canine blood. (*American Journal of Medical Sciences*, Jan., 1935. The correction chart is available from most firms dispensing medical laboratory supplies.) The packed red cell volume (PCV) obtained in the hematocrit test is employed in making the correction. For canine blood a standard PCV of 45 has been adopted. Until further information is available, corrected sedimentation rates of less than 15 mm. per hour are regarded as being within physiologic limits, whereas, corrected rates greater than 15 mm. per hour are interpreted as indicative of a pathologic process, the severity or intensity of which is in direct proportion to the magnitude of corrected rate of sedimentation.

Erythrocyte sedimentation rates were determined on the blood of 202 dogs submitted to the clinic for routine diagnosis and treatment. The corrected rates were less than 15 mm./hour in 125 cases and of these 9.6 per cent died, 15.2 per cent were destroyed and 75.2 per cent were later discharged. In the remaining 77 cases, the corrected sedimentation rates were above 15 mm./hour and among these 16.9 per cent died, 25.9 per cent were destroyed and 57.1 per cent were discharged. The chi-square test applied to these data shows a high degree of significance.

Packed Cell Volume: After completing the sedimentation test, the hematocrit tube is placed in a centrifuge and spun at 3,000 rpm for 45 minutes. The erythrocytes are thrown to the bottom of the tube and hence the mass is referred to as the packed cell volume or PCV. This volume is determined by reading the height of the column of packed cells in millimeters. By comparing the PCV, of 267 canine blood samples, with the hemoglobin in grams per 100 ml. of blood, determined with a Leitz photometer, and the erythrocyte number per cubic millimeter of blood, determined by actual count, it was found that a rather close correlation exists between these entities. From these data, a table has been prepared for use with canine blood, from which the presumptive hemoglobin concentration and erythrocyte count can be determined for each PCV value between 10 mm. and 60 mm. The actual counting of erythrocytes is subject to considerable error when done by unskilled individuals. The hematocrit, on the other hand, is comparatively free of error if care is taken to fill the tube properly and to employ the recommended speed and time in centrifugation. The presumptive erythrocyte number and hemoglobin concentration for each PCV between 10 mm. and 60 mm., as presented in the table, are sufficiently accurate for routine screening purposes. Actually, such conversions are not necessary for the PCV can be interpreted directly for canine blood, as follows: Readings falling between 35 and 55 mm. are regarded as normal; readings between 55 and 60 indicate dehydration or hemoconcentration; and readings between 25 and 35 are indicative of a moderate anemia; whereas, below 25, anemias of increasing severity are indicated.

Canine Blood*

Presumptive *Red Blood Cell Count* in millions per cubic mm. and *Grams of Hemoglobin* per 100 millimeters of blood based on *Volume of Packed Red Cells* in the Wintrobe Hematocrit centrifuged at 3,000 rpm for 45 minutes.

PCV	RBC ± .75 million	Hb ± .96 gram	PCV	RBC ± .75 million	Hb ± .96 gram
10	2.34	2.82	36	5.98	11.92
11	2.48	3.17	37	6.12	12.27
12	2.62	3.52	38	6.26	12.62
13	2.76	3.87	39	6.40	12.97
14	2.90	4.22	40	6.54	13.32
15	3.04	4.57	41	6.68	13.67
16	3.18	4.92	42	6.82	14.02
17	3.32	5.27	43	6.96	14.37
18	3.46	5.62	44	7.10	14.72
19	3.60	5.67	45	7.24	15.07
20	3.74	6.32	46	7.38	15.42
21	3.88	6.67	47	7.52	15.77
22	4.02	7.02	48	7.66	16.12
23	4.16	7.37	49	7.80	16.47
24	4.30	7.72	50	7.94	16.82
25	4.44	8.07	51	8.08	17.17
26	4.58	8.42	52	8.22	17.52
27	4.72	8.77	53	8.36	17.87
28	4.86	9.12	54	8.50	18.22
29	5.00	9.47	55	8.64	18.57
30	5.14	9.82	56	8.78	18.92
31	5.28	10.17	57	8.92	19.27
32	5.42	10.52	58	9.06	19.62
33	5.56	10.87	59	9.20	19.97
34	5.70	11.22	60	9.34	20.32
35	5.84	11.57			

Leukocyte Number: During centrifugation of the hematocrit the leukocytes and blood platelets accumulate in a layer immediately above the erythrocyte mass. This leukocyte mass appears as a whitish layer which is called the buffy coat. The thickness of this layer is

*Data based on 267 samples of canine blood.

roughly related to the total leukocyte count and the predominant leukocyte type. In blood, in which the polymorphonuclear cells predominate, as is the case with the canine in health, one millimeter of buffy coat is equal to about 10,000 leukocytes per cubic millimeter of blood. Beyond this point, each 0.1 mm. of buffy coat is equal to 2,000 leukocytes. For example, a buffy coat of 2.0 mm. would be equal to a total count of about 30,000 leukocytes; 1.5 mm. equals 20,000 leukocytes; and 0.5 mm. buffy coat is equal to about 5,000 leukocytes per cubic mm. of blood. In bloods in which the lymphocyte predominates, the buffy coat reading is representative of a greater number of cells than given above. The lymphocyte is smaller than the PMN leukocyte and thus a smaller buffy coat mass is formed in bloods in which the lymphocyte predominates. It cannot be overstressed, however, that the buffy coat is only a rough guide to leukocyte number.

Icterus Index: The upper half of the hematocrit tube contains the blood plasma. This plasma zone usually is pale or colorless in normal canine blood, but becomes yellow with the development of icterus. The icterus index is determined by matching the color of the plasma with the standards prepared from potassium dichromate. A combination blood sedimentation rack and icterus index comparator block with standards is available. (Arthur H. Thomas Company, Philadelphia, Pa.) An icterus index in excess of 5 units in the canine is abnormal.

Summary

The Wintrobe hematocrit test is satisfactory for the routine examination of canine blood. It is a simple procedure which does not require exceptional skill to obtain reliable results.

The time involved in making the hematocrit test is limited to that required to collect the blood sample and to fill the hematocrit tube. The tube is allowed to stand in a vertical position for one hour and the distance fall in millimeters of the red cell mass is recorded as the sedimentation rate of the erythrocytes. This reading is corrected to a standard packed cell volume using a prepared chart to obtain the corrected sedimentation rate. The hematocrit tube is then centrifuged at 3,000 rpm for 45 minutes to obtain the packed cell volume (PCV) of erythrocytes, the buffy coat layer of leukocytes, and the plasma zone. A table is presented from which the erythrocyte count in millions per cubic mm. of blood and the hemoglobin in grams per 100 ml. of blood can be predicted for each PCV reading between 10 mm. and 60 mm. The buffy coat layer provides a rough index of total leukocyte count and by matching the color of the plasma zone with standards prepared from potassium dichromate, the icterus index is obtained.

Dr. F. H. McNair Honored

On March 11, 1952, a dinner meeting was held by the Bay Counties Veterinary Medical Association honoring Dr. F. H. McNair, a charter member of this organization. Doctor McNair was graduated from Cornell University in 1905 and immediately took the New York state board examination to practice in that state. He was later contacted by veterinarians at the University of California as there was a great need by the people of Berkeley and surrounding communities for a veterinarian to care for livestock, both large and small. It was their belief that the Berkeley area would support a veterinarian.

DR. F. H. McNAIR

In 1907 Dr. McNair was examined for five days by the then existing Board of Examiners for the State of California. He was granted a license to practice. He joined the AVMA and the California State Association in 1909. He was an instructor at the old San Francisco Veterinary College and was kept busy with his practice in Berkeley. Doctor McNair continued his work until very recently when a series of illnesses forced his retirement.

As a token of his esteem, Dr. McNair was awarded an honorary life membership in the Bay Counties Veterinary Medical Association and given an appropriately engraved letter opener as a tribute to a man whom we are proud to call our friend.

Dr. Halverson and Two Board Members Reappointed by Governor Warren

Governor Earl Warren has reappointed Wilton L. Halverson, M.D., to his third four-year term as State Director of Public Health. Dr. Halverson has served in this position since 1943. His new term ends January 1, 1956.

Two members of the State Board of Public Health, Dr. Harry E. Henderson, Santa Barbara, and Dr. Elmer Belt, Los Angeles, have also been reappointed by Governor Warren to serve another four-year term ending February 2, 1956. Dr. Belt has served continuously since June, 1940, and Dr. Henderson has been a member of the board since April, 1944.

EQUITABLE COMPENSATION FOR VETERINARIANS

The following letter of transmittal with the accompanying report was sent to the State Personnel Board, the State Department of Agriculture and was widely circulated among livestock organizations:

California State Personnel Board
1015 L St., Sacramento 14, California
Attention: Mr. John F. Fisher, Executive Officer

Dear Mr. Fisher:

The California State Veterinary Medical Association is forwarding herewith the completed report of its Committee on "Equitable Compensation for Governmental Veterinarians" for consideration.

The contents, findings, and recommendations in this report were presented to this association at its annual winter meeting held in Davis, California, on January 27, 1952, and unanimously approved.

The veterinary profession, as a tax paying group in California, is numerically small; nevertheless, it is believed they are considerably above average as taxpayers.

This association is fully cognizant of the slight increase in cost involved. We are thoroughly convinced that considering the value of the livestock at stake in the handling of the problems involved, as well as the protection of human lives, the increased cost can and will be fully justified.

It is believed that the following problems are intimately involved in this request for adequate or appropriate salaries for veterinarians in state service:

1. Salary adjustments over an extended period to make the positions attractive from a career standpoint.
2. A promotion plan applicable to the entire organization with pay commensurate with the responsibility of the positions. This will require an increase in classifications and more career opportunities.
3. In other words, an integrated organization with appropriate salaries in grades coupled with reasonable promotion possibilities for all who enter the service to make the service attractive and interesting enough for young graduates to make it a career.

Our membership believes that favorable action on the recommendations presented herewith will ultimately provide a more efficient state veterinary service for California agriculture and public health.

It will be greatly appreciated if you will contact this office for any additional information you may deem essential or necessary to bring this matter to an early and hoped for successful conclusion.

CHARLES S. TRAVERS,
Executive Secretary,
California State Veterinary
Medical Association

Report of the Committee on Equitable Compensation for Veterinarians

The committee appointed by the California State Veterinary Medical Association in June, 1951, to inquire into and make recommendations as to adequate and appropriate salaries in an endeavor to assist in the recruitment of career service veterinarians for employment in the State Department of Agriculture, Division of Animal Industry, is submitting the following report for presentation to the State Personnel Board for favorable consideration.

These findings and recommendations are based on an extensive study of the organization and salaries now paid in comparison with salaries and earnings of veterinarians in other activities of the profession both within and outside of the state.

In arriving at these findings and recommendations it was found that in order to comply with the state salary schedules and other regulations it was necessary to recommend a reclassification of the state veterinary positions if the state is to maintain and operate an efficient and progressive organization in keeping with present day veterinary science.

First—Comparison between salaries paid in state and industry.

A statewide survey was made with over a 70 per cent response. (Preliminary report of this committee, October 15, 1951.) There were two classes of pay schedules obtained from industry: Salaries paid (a) Inexperienced graduates; (b) Experienced practitioners.

Findings

First Year Salaries:

1. (a) State salaries equal = to inexperienced graduates.
   Salaries in practice.
   (b) State salaries less = experienced practitioners are paid $50 to $100 more per month.

Second Year Salaries:

State—Routine Workers.
Livestock Disease Specialists
Livestock Pathologists.
Supervisor Meat Inspectors—salaries are below the average paid to both inexperienced and experienced practitioners in industry in the state.

Third Year Salaries:

Just a repetition of inequalities shown in second year summary, only greater. It will be seen that salaries as well as opportunities for advancement of veterinarians in industry greatly exceed the salaries and opportunities for advancement offered by the state.

There are certain other factors that may be considered if a proper comparison is to be made—such as hours worked, days off, holidays, vacation, sick leaves, if granted or accumulated, and retirement. Hence the following facts are presented:

1. State veterinarians, other than field men, have specified hours of work—so do those in industry.
2. State veterinarians have days off—so do those in industry.
3. State veterinarians have holidays—so do those in industry.
4. State veterinarians have vacations—so do those in industry.
5. State veterinarians have sick leave—not so called in industry, but allowances are made for absence through sickness and

probably state unemployment insurance if absence is long enough.

6. State veterinarians have retirement—but in industry the additional wages more than pays for retirement fund benefits as well as Federal Social Security which the state employee does not have.

Second—The Federal Bureau of Animal Industry is the only other organization in the United States with an organization and activities comparable to that of the California Division of Animal Industry. It is believed that no other state offers a comparable organization or activity. Hence, the committee is offering for comparison the salaries paid the United States Bureau of Animal Industry personnel and the California Division of Animal Industry personnel together with the classifications:

1. Routine workers — Salaries (Veterinarians):

	1st Year	5th Year	15th Year	20th Year
California D.A.I.	$4,740.00	$5,772.00	$5,772.00	$5,772.00
U. S. B.A.I. ...	$4,632.50	$5,497.50	$6,060.00	$6,185.00

Comment

It will be seen that the salary of the California Division of Animal Industry veterinarian reaches a maximum in five years and remains at that level for the lifetime of the recipient (this for routine workers). The United States Bureau of Animal Industry veterinarian receives a small raise every year for seven years, then is granted longevity pay raises at three-year intervals in the 10th, 13th and 16th years, to reach the maximum salary in grade.

The United States Bureau of Animal Industry veterinarian receives $2,221.60 more pay during the first 20-year period in grade and $413 more per year thereafter to retirement.

(Grade GS-7 for six months and then Grade GS-9.)

2. California D.A.I. — Livestock Disease Control Specialist. Supervising Veterinary Meat Inspector:

Wage scale $458 to $556 a month—in five years maximum. $5,496 to $6,672 annually.

U. S. B.A.I.—Supervisors, GS-11:

Wage scale $495 to $578.33 a month—in 9 years maximum. $5,940 to $6,940 annually.

Over the nine-year period, the United States Bureau of Animal Industry Supervisor, GS-11 grade, receives a total of $912 more pay and $268 more pay per year thereafter.

3. California D.A.I.—Livestock Pathologist:

Wage scale $458 to $556 a month—in five years maximum. $5,496 to $6,672 annually.

U. S. B.A.I.—Pathologist, GS-12:

Wage scale $586.66 to $670 a month—in nine years maximum. $7,040 to $8,040 annually.

The difference in pay over the nine-year period, when the U. S. B.A.I. reaches maximum salary is over $10,000 in favor of the U. S. B.A.I. Pathologist GS-12.

It may be noted here that the Pathologist (Human Medicine) in California has the following pay schedule:

Wage scale $710 to $862 a month—in five years maximum. $8,520 to $10,344 annually.

4. California D.A.I. — Specialists: Sheep, Swine, Poultry. (These ratings now consolidated with Livestock Disease Control Specialist.)

Wage scale $458 to $556 a month—in five years maximum. $5,496 to $6,672 annually.

U. S. B.A.I.—Specialist, GS-13:

Wage scale $696.66 to $780 a month—in nine years maximum. $8,360 to $9,360 anually.

A difference in pay over the nine-year period of $2,688 per year in favor of the U. S. B.A.I.

Bureau of Animal Industry.

It can readily be seen that comparing the state salaries with those of federal, the pay schedules are much greater in federal employment.

It might be pertinent here to again mention that the United States Bureau of Animal Industry is the only comparable organization. It is believed that no other state is organized in all branches of veterinary Public Services as is California. Other states have separate organizations or departments for Animal Disease Control or Veterinary Laboratory Service or Veterinary Meat Inspection, but not all three activities combined.

Third—Commercial Veterinary Salaries.

We have not taken into consideration salaries paid in Commercial Veterinary Industry (Biological and Pharmaceutical establishments). They are too high for comparison here.

A general summary clearly demonstrates that the salaries and positions assigned for state work are noticeably out of line with all other wages and earnings of veterinarians in industry (private practice), federal government and other veterinary activities in California state service.

For instance: The salaries of veterinarians in various California state activities are grouped as follows:

1. Highest group—Teaching profession.
2. Public Health Chief Veterinarian.
3. Public Health Assistant Veterinarian.
4. State Division of Animal Industry Supervisory group and Livestock Pathologist.

5. Lowest paid group—State Division of Animal Industry routine veterinarians.

Conclusions

Educational requirements for the degree of Doctor of Veterinary Medicine, coupled with state license to practice veterinary medicine, which determines eligibility of applicant for some state positions are either entirely too high or state salaries are entirely too low, considering character of service required. The profession has already determined through the rapid and extensive advancements in veterinary science that the educational requirements are not too high but essentially necessary to cover the scientific field pertaining thereto. (Four years high school; two years pre-veterinary college; four years veterinary college.)

No other deduction can then be made other than that the salaries paid by the California Division of Animal Industry, Department of Agriculture, are not in keeping with services performed, also considering the increased value of the livestock under its jurisdiction, not to mention the safeguarding of the Public Health through intelligent livestock disease control as it affects diseases communicable to man and more especially at this time the great importance of providing the highest type procurable for the protection of the livestock interests in the state.

Therefore, the salary scale by all comparisons provided by state regulations does not meet present day veterinary standards.

It can be said here that several statewide agricultural organizations, which were consulted, have passed resolutions favoring an adequate pay scale for veterinarians in state service comparable to educational requirements for the profession and service standards desired.

The tremendous value of the livestock and poultry in this state, together with the increasing danger or possibilities of outbreaks of contagious diseases—as the present outbreaks of foot-and-mouth disease in Canada and Mexico—places greater and greater responsibilities on this organization.

Reviewing the various pay scales and work schedules of positions in the State Department of Agriculture it is found that the veterinary profession has the highest basic educational requirements in the department and in certain classifications, a state license to practice veterinary medicine is required to obtain eligibility. It is believed that other classifications outside the veterinary profession do not require state licenses. It is the opinion of this committee that a state license in veterinary medicine should be required of all appointees not later than one year after appointment.

The above is additional proof of the just request by this committee that the positions and pay scales should be adjusted to meet the standards of education, training, and professional work required of its members.

The Personnel Board pay scales conform to a regulated pattern that provides increases in each position up to five years only, when the maximum pay is reached for the rest of the employees' career on that classification. This is a great detriment to a professional group entering the service and very few present day trained veterinarians are willing to make a career out of such a situation. Further the character of the professional service rendered is strictly along specialist lines.

Veterinary Meat Hygienist (Meat Inspector) is confined to disease diagnosis, sanitation, and gross pathology (cattle, sheep, swine, goats and horses).

Veterinary Disease Control Specialists embraces control and eradication of communicable diseases and quarantine measures.

Veterinary Laboratory Assistants—laboratory training.

These specialties or activities followed for any length of time with proper study unfits the veterinarian for other outside activity in the profession, as such state activities are not to be had in industry with the exception of laboratory training. Hence, present-day graduates are reluctant to take up a state veterinary specialty to the exclusion of all other branches of the profession unless the ultimate remuneration will, to a reasonable degree, warrant making the position a career one with a future.

Recommendations

To bring about a satisfactory adjustment of salaries and a career service, the following classifications, grouped by salary ranges, is proposed and believed to be in keeping with present day standards of the veterinary profession.

1. *Veterinary I*—Entrance salary:

   Monthly: $395 to $481—in five years.
   Yearly: $4,740 to $5,772.

Upon completion of not less than four years' service, Veterinarian I becomes eligible for promotional examination to Veterinarian II if efficiency rating warrants and vacancy exists.

2. *Veterinarian II:*

   Monthly: $436 to $530—in five years.
   Yearly: $5,232 to $6,360.

This position in Veterinary Meat Hygiene, Veterinary Field Service and Veterinary Laboratory Assistant, calls for greater responsibility in making decisions and planning work schedules.

3. *Veterinarian III* — Assistant Pathologist (Veterinary)

   Monthly: $458 to $556—in five years.
   Yearly: $5,496 to $6,672.

4. *Veterinarian IV:*

   a. Supervising Veterinary Communicable Disease Control.

b. Supervising Veterinary Meat Hygienist.
Monthly: $505 to $613—in five years.
Yearly: $6,060 to $7,456.

5. *Veterinarian V:*

a. Pathologist, Veterinary.
At least five years' experience as a professionally recognized Pathologist.
Director of operations of a state laboratory with its personnel.
Authorized only in a general livestock and poultry pathology laboratory. One might be assigned as Supervisor of Laboratories in addition to his other duties.

b. Specialists:
Supervisor Brucellosis and Tuberculosis Control.
Sheep Disease Specialist.
Swine Disease Specialist.
Poultry Disease Specialist.

The position of Sheep, Swine, and Poultry Disease Specialists might be combined with the position of Supervising Veterinary Communicable Disease Control with pay of Veterinarian V and to be located in the most suitable area to meet the needs of the service.

Supervisor of Brucellosis and Tuberculosis Control—to be a new position and set up in a central location most advantageous to perform the duties required.

Monthly: $584 to $710—in five years.
Yearly: $7,008 to $8,520.

Respectfully submitted,

LEO F. CONTI,
ROBERT J. FOSTER,
JOSEPH M. ARBURUA, *Chairman*,
Committee for Equitable Compensation for Governmental Veterinarians

Successful Examinees

The following candidates for the January, 1952, examination in veterinary medicine have been granted their licenses to practice in the State of California:

Howard Marvin Adams, Route 2, Box 231, Portland, Oregon; Don Leroy Caswell, Salinas, Calif.; Neil Verne Follett, 630 E. Peach St., Bozeman, Mont.; Jose G. Garcia, 639 Wheeler St., Seaside, Calif.; John Edw. Blake Graham, 2146 Sutterville Rd., Sacramento, Calif.; Earl Leavitt Greene, Jr., Whittier, Calif.; Robert Oliver Harvey, 511½ G St., Petaluma, Calif.; Herbert Roland Hedler, 321 Sweet Lane, Cottage Grove, Oregon; Keith George Libke, 421 Covena St., Modesto, Calif.; Kimball Ross Madill, 2204 Foothill Extension, Pasadena, Calif.; Nathan Miner, 208 Natoma Ave., Santa Barbara, Calif.; John Francis Moore, 1613 Penmar Ave., Venice, Calif.; Mehmet Noyan, c/o Dr. Sam Fisher, Marysville, Calif.; Edward Albert Rhode, Jr., Veterinary Clinic, U. C., Davis, Calif.; James Earl Sharkey, 446 University Ave., Davis, Calif.; Clayton Stephens, c/o B. M. Stephens, Bluffton, Ga.; Jacob Strong, 473 Tennessee Lane, Palo Alto, Calif.; Peter Wolfgang Ucko, 516 No. Second St., Clinton, Iowa; Robert Von Tour, Box 1063, Turlock, Calif.; Joseph Wm. Wellington, P. O. Box 662, Reno, Nevada.

New Local Association

The veterinarians from Yuba City and Marysville north to the Oregon line have organized a medical association to be known as the Northern California Associations of Veterinarians. This group includes those veterinarians in the upper Sacramento valley and adjacent mountain vicinity. They are holding meetings once a month in a different town in the valley with the veterinarian in that town serving as chairman for that meeting. Their next meeting will be held in Oroville in April followed by a meeting in Corning in May. Dr. H. A. Snelbaker has been elected executive secretary to handle the affairs of this new group and to attend to business correspondence. He may be contacted at the Oroville Animal Hospital, P. O. Box 1252, Oroville.

Appointments: Dr. E. C. Jones has been reappointed to the Board of Examiners in Veterinary Medicine.

Applicants

Arthur J. Freid, San Francisco. Vouchers: Edward Bland, Albert Chaffee.

Robert F. Burns, San Diego. Vouchers: B. J. Elander, Cyril J. Padfield.

Robert Cotton, Los Angeles. Vouchers: Leonard I. Beller, W. J. Zontine.

Foreign Abstracts

SILVA, A. GOMES DA (1949): "Contribution to the Knowledge of the Normal Dog Eye Fundus." *Revista da Faculiade de Medicine Veterinaria.* Sao Paulo, Brazil, Vol. 4, Fasc. 1, pages 197-219.

The author describes the "fundus" of normal dogs. The studies are made on about 80 retinae. The observations on 23 animals were complete. The work has 22 pictures in colours.

Silva describes the tapetrum nigrum, the tapetrum lucidum and its parhculanties, the blood supply and the vascularization of the dog's retina, the papilla nervi optici, the thickness of the retina and the pseudo macular region. He mentions the possibility of the correlation between the particulars of the colours of the tapetrum lucidum and the pureness of the breed. He suggests a classification of the dog's "fundus" by the type of venous vascularization of the pailla.

* * *

CAPT. G. VENKATA NARUSU (1951): "Homeopathy in Canine Distemper." *The Indian Veterinary Journal*, Vol. 27, No. 5 (391-392).

The author found his treatment based on homeopathy to be most successful in dogs two to eight months old. He gives a description of the symptoms in different forms of distemper and for each of them the respective homeopathic treatment.

Forty-eighth Annual Report of the State Board of Examiners in Veterinary Medicine, 1951

Department of Professional and Vocational Standards

Letter of Transmittal

To His Excellency, Earl Warren
Governor of the State of California
Sacramento, California.

Your Excellency:

Conforming with the provisions of Section 4810 of the Business and Professions Code of the State of California, Gaylord K. Cooke, Secretary of the Board of Examiners in Veterinary Medicine for the State of California, has the honor of presenting for your consideration the forty-eighth annual report, showing the activities of this branch of the State Government for the Year 1951.

Respectfully submitted,

GAYLORD K. COOKE, D.V.M., *Secretary.*

Berkeley, California
December 31st, 1951.

Officers and Members of the Board

President, Dr. Ernest C. Baxter, 816 So. San Pedro St., Los Angeles.

Vice-President, Dr. Eugene C. Jones, 50 - 59th Place, Long Beach.

Secretary, Dr. Gaylord K. Cooke, care Health Department, Berkeley.

Dr. R. A. Ball, 1318 McHenry Ave., Modesto.

Dr. Ernest H. Houchin, 40 West Santa Clara Ave., Ventura.

Chas. B. Jaekle, Investigator, care Health Department, Berkeley.

Meetings

During the year 1951 the Board of Examiners in Veterinary Medicine held the following meetings:

January 25, 26, 27 ..... San Francisco
June 28, 29, 30 ..... Los Angeles

Examination Statistics

Date	No. Participating	No. Passed	No. Failed
January 25, 26, 27	19	17	2
June 28, 29, 30	48	45	3

San Francisco—January 25, 26, 27

Bailey, Wm. Harrison
Boobar, Robert Clair
Bramer, Clarence Newell
Davis, Elmer Nelson
Dean, Charles Ross
Downs, Geo. Perry
Fish, Yuri Elden
Gurley, Claybron Harold
Klein, Harold Maxwell
Kuhn, Ulysses S. G.
Liebengood, Don Malcolm
Lukas, Gus Nicholas
Mashek, Victor R.
Puterbaugh, Allen Rex
Thomas, Lloyd Geo.
Thorson, Thaddeus Eugene
Thurber, Warren Bixby
Whitson, Clyde Francis
Zimmerman, Manuel

Los Angeles—June 28, 29, 30

Adams, Arthur James
Andresen, James William
Bean, Howard Ellis
Berchem, Julius William
Boetger, John George
Burns, Harold Clement, Jr.
Burroughs, Harold Ernest
Carleton, Thomas Jerome
Caudle, H. C.
Cello, Robert Morgan
Childs, Charles Elton
Clark, Arodd Ward
Coleman, Charles Henry
Collins, Elwood Reed
Colton, Max Warren
Davidson, James Carl
DeJong, Dennis Harvey
Dinsmore, Jack Roberts
Freid, Arthur Julian
Gansberg, Clarence Fredrick
Goldston, Leo Solomon
Hall, Vance Clark, Jr.
Hartle, Dwight Cecil
Hunter, Charles Calvin
Isbelle, Harry Carl
Kendrick, John Wesley
Marble, Donald Wayne
Marron, Joseph Ambrose
Mashek, Victor R.
Matulich, William Peter
McGough, Stanley Eugene
Miner, Nathan
Ohlson, Thomas Walter
Olney, Richard
Prentice, Marvin Monroe
Przybyllok, Hans Hermann
Rea, Robert Arch
Reed, Raymond Edgar
Schaffer, Myron Holt
Siemens, John Wesley
Smith, Raymond G.
Swanson, Orin George
Swart, Raymond Leroy
Tyler, Walter Steele
Waidhofer, Joe John
Wasserman, Bernard
Weeks, Hubert Lee
Windslade, Weldon Archer

* * *

During the current year the term of Dr. E. F. Sheffield, of San Diego, expired, and Dr. E. H. Houchin, of Ventura, was appointed to fill the vacancy thus created.

Law Enforcement

During 1951 there were no convictions of unlicensed persons obtained by the Board. Thirty-eight new complaints were received, thirty-four complaints investigated and ten warnings were issued.

* * *

All registrations and finances are handled through the Department of Professional & Vocational Standards in Sacramento.

Number of licensed veterinarians as of Dec. 31, 1951 .. 1139
Number of licensed veterinarians in the Armed Forces ... 37

Dear Dr. Cooke:

This is in reference to your letter of February 7, the action of the board as of January 25, 1952, in establishing the annual renewal license fee in the amount of $10.00, to become effective July 1, 1952, is hereby approved.

Very truly yours,

JAMES A. ARNERICH
Director, State of California
Department of Professional and Vocational Standards

LARGE ANIMAL DEPARTMENT

Staphylococcic Abscesses in the Equine

By JOHN B. CARRICABURU, D.V.M., *Santa Ynez*

A noteworthy equine infection was observed in Santa Barbara County during the summer of 1951.

About June 15, I was called to see a filly which appeared to have been kicked in the pectoral region. The case was dismissed as a large contusion after close examination failed to reveal the presence of a hematoma or seroma. About five days later I was again called and found a huge abscess had developed in the same area; the lesion was incised, drained of copious amounts of pus and treated with tincture of iodine. Healing was noted soon after treatment.

Thereafter, throughout the summer I received an average of two calls per week to treat similar cases. Many of the abscesses were deep seated and had thick fibrous walls. External palpation revealed no flocculation. In the later stages of development a majority of these lesions would rupture spontaneously, but in three cases the deep abscesses remained quiescent. The affected areas were massaged daily with liniments and mild stimulants, but without apparent effect. After two or three weeks, the abscesses were opened and drained, after which healing occurred. Most abscesses, however, ruptured spontaneously, leaving large areas of necrotic skin and underlining tissue. Healing occurred rapidly after rupture, although at times the areas of necrosis were so extensive that three to four weeks passed before healing was complete. The condition did not appear to be contagious.

On a local dude ranch where 70 horses were maintained, three cases were observed all summer, each about one month apart. No effort was made to isolate the infected cases. In most of the other cases observed only one case occurred per ranch, irrespective of the total number of horses present. It was assumed that the method of transmission was associated with some insect vector inasmuch as cases were consistently seen on isolated ranches in mountainous areas where spread by contact seemed impossible. The lesions were most commonly found in the pectoral region. Other sites involved included the areas immediately behind the ulna, on the thorax, and in the axillary and inguinal regions. In two cases mammary gland involvement was noted.

In no case was systemic reaction noted, although abscesses were frequently so huge that they interfered with locomotion. Metastasis from the pectoral area to the inguinal area and vice versa was frequently noted. Penicillin injections for three to four days appeared to minimize metastasis. The use of penicillin was unsuccessful in an attempt to abort any developing abscess.

The cause of these cases was considered to be a member of the Staphylococcus group, inasmuch as this organism was isolated from the pus.

Dr. J. R. Whitman of San Luis Obispo reported similar findings in a personal communication in cases which he observed while in practice in the Bay Area.

Dr. J. L. Bickmore of Santa Maria told the writer of a similar outbreak which he had encountered several years ago and designated as "bastard strangles."

American Dairy Science Association Meeting

The University of California College of Agriculture will be host to the 47th Annual Meeting of the American Dairy Science Association June 24, 25 and 26, 1952, at Davis.

This will be the first meeting of this association held in California in 21 years.

About 1000 delegates, both scientists and commercial dairymen, from the United States and Canada, are expected to attend the sessions.

The association is composed of research, extension, and commercial specialists in dairy husbandry and dairy industry.

Members of the various divisions and departments of the college are planning the program for this meeting of the largest dairying association in the world. Technical research papers, symposia, forums, and organized discussions on all phases of dairying will be included.

FOOT AND MOUTH OUTBREAK IN CANADA

Owing to an outbreak of Foot and Mouth Disease in central Canada involving 22 premises and 25,000 animals, the Federal Bureau of Animal Industry desires that all veterinarians and livestock owners be on the alert.

Suspected cases should be reported immediately to the State Veterinarian for diagnosis and control.

NEWS HERE AND THERE

Dr. A. K. Carr Retires; Dr. A. G. Boyd Successor

The California Department of Agriculture announced the retirement, effective March 17, after 23 years' service, of Dr. A. K. Carr, Chief of the Department's Division of Animal Industry. Dr. Carr stated that he wishes to retire to attend to personal affairs. He plans to make his home in Southern California.

To succeed Dr. Carr, Director Brock announced the appointment, effective March 20th, of Dr. Arthur G. Boyd of Sacramento, Assistant Chief of the Division.

Dr. Boyd has been identified with direction of both campaigns against foot-and-mouth disease in California, and was prominent in the development and direction of the present system of state animal disease diagnostic laboratories. He became Assistant Chief in 1929

Dr. Boyd's services have also been outstanding in the long and successful campaigns to control bovine tuberculosis in California, and to control and eventually eradicate sheep scabies. More recently he has been a leading advisor in the development of the state's program to control Brucellosis, an infectious disease of cattle sometimes known as Bang's disease.

Dr. Young Appointed Western Regional Director

Dr. W. A. Young has accepted the position of western regional director of the American Humane Association with headquarters in Hollywood, California. His work on the West Coast, with a staff of five, will comprise the supervision of animals and their use in motion pictures, as well as in developing television field for which the motion picture industry will make films. There will also be opportunity to further the work of livestock loss prevention, a field in which he has been active for a number of years.

Dr. Young received his D.V.M. degree from Iowa State College in 1919. After a brief period of practice, he spent several years as a veterinary inspector of livestock insurance. He served 16 years as managing director of the Anti-Cruelty Society of Chicago. He is a past president of the Chicago Veterinary Medical Association. In 1947 Dr. Young was elected treasurer of the AVMA and has served in that office since then.

Dr. Young's decision to take up his new position resulted from the recent death of Mr. Robert F. Seller, president of the American Humane Association, and the subsequent transfer of the western regional director to the association's headquarters in Albany, N. Y.

Dr. Stanley Freeborn Named Dean At Davis

President Robert Gordon Sproul named Dr. Stanley B. Freeborn acting Dean of the University of California College of Agriculture last month.

He fills the vacancy created by Claude B. Hutchison who accepted an appointment with the State Department Technical Assistance (Point Four) Program. Hutchison is on terminal leave from the University from which he retires July 1st.

Dr. Freeborn came to the University of California from Massachusetts in 1914 as instructor in entomology, became assistant professor in 1918, associate professor in 1925, and professor in 1932.

In 1937 he was made assistant dean of the College of Agriculture.

Since 1940 he has been faculty representative of the University of California in the Pacific Coast Conference, and served two terms as president of that organization.

Dr. C. U. Duckworth to Be European Advisor

At the request of the U. S. Mutual Security Agency, Dr. C. U. Duckworth, Assistant Director of the California Department of Agriculture, Sacramento, has been granted a leave of absence to go to Europe as an Agency Advisor on livestock disease control problems for the European Recovery Program.

He will be replaced in California for a one-year period by his brother, Dr. Ray E. Duckworth, who for 30 years or more has been one of the outstanding veterinarians of the State Department of Livestock Disease Control Administration, and in recent years, supervising inspector for the Coast Central Counties, with headquarters in San Francisco.

Dr. Ray Duckworth had retired from state service on January 1 this year, but agreed to take over the duties of Assistant Director during his brother's absence.

New Locations: James B. Wight has sent a change of address from North Hollywood to Oceanside. Mrs. Peterson writes us Joe Waidhofer of Los Angeles has bought her hospital in Stockton. Dr. C. Ross Dean announced the opening of his small animal hospital in Anaheim in February.

Burglarized: Ignoring the anxious behavior of her dog, Maggie, Mrs. Norman Jerome remained calmly in her living room while burglars removed diamond rings. Dr. Jerome, who has been known to berate the behavior of the lab. retriever, was not at home at the time.

Transportation and Reservations for June Convention

Arrowhead Springs Hotel, San Bernardino, June 16-17-18, 1952

At Arrowhead Springs Hotel your setting is an estate covering some 2200 acres of enchanting woodland and mountainside beauty. From your guest room, you will enjoy the panoramic view of picturesque vineyards and orange groves, stately palm trees and lovely gardens. Here are world renowned mineral springs, steam caves, and mud baths to create a healthful paradise, less than 65 miles from Los Angeles.

From the report of your Program Committee, headed by Dr. Paul DeLay (Doctors Marvin H. Harvey, Donald Jasper, H. I. Ott and Charles D. Stafford), this meeting should be one of the most outstanding three-day meeting your association has ever held.

The Arrowhead Springs Hotel is idealy appointed and lends itself perfectly for our needs. The theater, which will house the General Sessions and Large Animal Meeting, and the informal room for the Small Animal Meeting, are perfectly appointed for these purposes.

The Candlelight Room for the banquet, entertainment and dance is unsurpassed for these functions.

Those attending the Women's Auxiliary Meeting, at this session, have a great treat in store for themselves as the Women's luncheon will be set by the emerald clear pool. The pool with its scalloped edges is luxurious and spacious. It is fed by mountain spring water, temperature controlled. There are cabanas, bar and food service at the pool.

Plan your summer outing this year at the Annual CSVMA Meeting, combining your attendance to your State Meeting and vacation in these ideal surroundings. You have the assurance of service and hospitality in the fine tradition of the Hilton Hotels.

Make your reservations early. The management at Arrowhead is sending you a beautifully illustrated folder together with a reservation form for your convenience. Send it in immediately giving the number in your party, type of room desired and time of arrival. Those going from the San Francisco Bay area should make arrangements through Mr. E. H. Hagerman, Southern Pacific Company, Douglas 2-1212, Extension 2583; in Oakland, Mr E. Milliken, Templebar 2-2121, Extension 4172. Arrangements are being made to have buses meet the Southern Pacific Daylight and the Lark at Glendale, to take passengers direct to the hotel.

Your cooperation in helping to make this an outstanding meeting will be greatly appreciated.

Please make your reservation direct to Mr. J. G. P. Malloy, Assistant Manager, Arrowhead Springs Hotel, San Bernardino, California.

American Animal Hospital Association Meeting

April 30 — May 3, 1952

The American Animal Hospital Association meeting will open on Wednesday morning, April 30th, at the Huntington Hotel, Pasadena, with a golf tournament for members and convention guests. The afternoon will be devoted to a business meeting for members and the assembling of booths. The general sessions will open on Thursday to be followed by three days of scientific papers and three sessions of telecasting. The Huntington Hotel, Pasadena, offers a unique setting for the convention. All veterinarians are cordially invited to attend this meeting.

Dr. Myron A. Thom will succeed Dr. Ralph E. Ruggles as president of the association.

Dr. Wayne Riser is executive secretary. His address is 5335 Touhy Avenue, Skokie, Illinois.

Nevada State Veterinary Medical Association

The Nevada State Veterinary Medical Association held its annual meeting in Reno on March 28-29. Dr. Joseph M. Arburua, member of the Executive Committee of the AVMA and chairman of the CSVMA History Committee, was one of the principal speakers, together with Dr. Jacob Traum, Experiment Station School of Veterinary Medicine, Davis, and Dr. Albert L. Tietze of Bakersfield.

International Congress Meeting

II International Congress of Physiology and Pathology of Animal Reproduction and of Artificial Insemination, July 7-11, Copenhagen. Thos. Cook & Son's nearest office will arrange details for you if you plan to take this trip. They have been appointed official travel agent for this congress. Members of the CSVMA have been invited by Ed Sorensen, Secretary General of the Congress, to participate on this program. His address is: The Royal Veterinary and Agricultural College, Copenhagen.

Dinner Meeting

April 22, 1952, at the Hotel Californian, Fresno, California.

Dr. Mark Morris of Topeka, Kansas, will be guest speaker and will talk on Canine Nutrition. The meeting will start promptly at 8:30 p.m. and the ladies are cordially invited. Reservations should be made through Dr. D. E. Barr, 4990 Ventura, Fresno, California.

Dr. Morris is an interesting speaker and is an authority on canine nutrition.

OPPORTUNITIES

Student Wants Summer Work

1953 graduate of Colorado A & M, California resident, married, age 32, animal experienced, desires summer employment in a large animal or mixed practice, prefer Central or Northern California. Box 4-C, care of THE CALIFORNIA VETERINARIAN.

* * *

Position Wanted

June graduate of University of Illinois Veterinary College, married, two children, draft exempt, interested especially in small animals and poultry. Box 4-A, THE CALIFORNIA VETERINARIAN.

* * *

Small animal or equine assistantship or partnership. Received DVM 1952, Ohio State University. B.S. degree. Married, two children, 32 years, Protestant, veteran, summer experience. Richard Weldon, Apt. B, 587 Huron St., Columbus, Ohio.

* * *

Position as Associate Veterinarian by California licensed veterinarian. 47 years old and with 13 years' experience in his own mixed practice. Dr. Clayton Stephens, Gen. Del., Pensacola, Florida.

* * *

Position wanted by woman graduate as assistant veterinarian in a small animal hospital. Position to begin about July 1st. Box 4-D, THE CALIFORNIA VETERINARIAN.

* * *

Graduate of Colorado, 1952, with no military obligations, desires a position in Northern California with small animal practitioner or in a mixed practice. Alvin M. Schumann, 171 Forest Street, Fort Collins, Colo.

* * *

Booking now for the summer months, experienced graduate veterinarian doing relief work; small animal hospital or mixed practice. Licensed in California and Arizona. Address Box 4-D, care of Mr. C. S. Travers, THE CALIFORNIA VETERINARIAN.

* * *

For Sale

Small animal practice and fully equipped hospital (X-ray) in Northern California. Draws from 20,000 well-to-do population. Gross exceeds $1,500 per month. Practice, hospital and real estate, $31,000. Terms. Contact Box 4-F, THE CALIFORNIA VETERINARIAN.

* * *

Small animal hospital in expanding Southern Coastal community. Present accommodations for 35 pets. Two furnished apartments. About $7,500 to handle. Good terms. No lease considered. Contact Box 4-G, care of THE CALIFORNIA VETERINARIAN.

For Rent or Sale

Small animal hospital, excellent location. Mrs. McKean Boyce, 624 S. Hill St., Oceanside, Calif.

* * *

Veterinarian Wanted

Aggressive small animal specialist. Salary, later lease or sell. Real chance for right kind of a graduate. Small animal surgery and clinic important. In San Fernando Valley, north of Hollywood. Box 4-B, care of THE CALIFORNIA VETERINARIAN.

* * *

Veterinarian, preferably with California license, contact Pets Unlimited Incorporated, 3170 Sacramento Street, San Francisco, Calif. Phone WEst 1-4929.

* * *

Practice Wanted

Desire to purchase or lease with option to buy a small animal practice in California. Contact Box 4-E, THE CALIFORNIA VETERINARIAN.

Quotation from an Advertiser

"It looks to us as if we need to test more thoroughly various magazines for their ability to sell products for us, as we took more space in 1951 in more different magazines than ever before but our sales did not reflect this increase in advertising. We have increased our direct mail campaign, and certainly we would like to return to your Journal as soon as we can, but we think you will agree it is necessary for us to learn as much as possible what magazines, if any, help us in our selling campaign."

We should give the above quotation some thought because our advertisers make it possible for THE CALIFORNIA VETERINARIAN to exist. *In other words, their support of us merits our support of them.*

Return from Trip to South America

Dr. and Mrs. J. G. Hardenbergh, Evanston, Dr. C. L. Miller, Oak Park, and Mrs. A. E. Bott, Belleville, have returned from the first Pan American Veterinary Congress, held in Lima, Peru, in October. Dr. Hardenbergh appeared on the program and Dr. Miller was appointed to the committee on rabies. Mrs. Bott addressed the Auxiliary of this group as president of the International Auxiliary.

Dr. and Mrs. Hardenbergh and Dr. Miller later flew to Buenos Aires and visited several South American cities enroute home.

Dr. George H. Barry Appointed Sanitation Officer

Dr. George H. Barry of Albion has been appointed Sanitation Officer for the Mendocino Coast. He will be in charge of all sanitation assignments in Fort Bragg and throughout the Mendocino Coast district. Dr. Barry's headquarters will be in Fort Bragg.

Anti-Canine Distemper Serum . . .

(Lockhart)

also confers passive immunity to

Infectious Canine Hepatitis

is the therapeutic agent of choice of many practitioners. When administered in the usual recommended dose, this product affords adequate passive immunity to meet demands of discriminating veterinarians.

Ashe Lockhart, Inc., was the first to produce anti-canine distemper serum for use as a therapeutic and prophylactic agent.

In addition to its value for early treatment of infected animals and for protection of exposed puppies against distemper, Anti-Canine Distemper Serum (Lockhart) will protect dogs which may be exposed to infectious canine hepatitis. Controlled experiments and field use indicate this dual role. When given Anti-Canine Distemper Serum (Lockhart) at the rate of 0.5 cc. per lb. body weight, treated animals resist exposure to hepatitis.

(Write for booklet containing details of experiments and conclusions revealed by controlled research.)

ASHE LOCKHART, INC.

Producers of Better Biologicals for Graduate Veterinarians

800 Woodswether Road **Kansas City 6, Missouri**

Chloromycetin is available in a variety of forms: 250 mg. Kapseals®, 50 and 100 mg. Capsules, 1% Ophthalmic Ointment, and in 25 mg. Ophthalmic Powder for Solution.

Chloromycetin®

NOT IDENTICAL—NOT SIMILAR TO ANY OTHER ANTIBIOTIC CHEMICALLY

CHLOROMYCETIN (chloramphenicol, Parke-Davis) HAS A WIDE RANGE OF USEFULNESS AND IS OF UNUSUAL IMPORTANCE IN VETERINARY THERAPY—DUE TO ITS RAPIDITY OF ACTION AND RANGE OF BENEFICIAL USES.

SMALL ANIMALS—Chloromycetin has been employed for: Gastroenteritis of dogs and cats with accompanying diarrhea—25 mg. per lb. body weight once daily. Urinary tract infections of dogs—25 to 75 mg. per lb. body weight daily in divided doses at 8-hour intervals. Secondary bacterial invaders of canine distemper—75 mg. per lb. body weight daily in divided doses at 8-hour intervals. Infectious feline panleukopenia—50 mg. twice daily regardless of the size of the cat. Pulmonary infections of dogs and cats and other infections due to Chloromycetin-susceptible organisms—75 mg. to 150 mg. per lb. body weight daily in divided doses at 6- to 8-hour intervals.

LARGE ANIMALS—Hemorrhagic septicemia (shipping fever) of calves—8 Kapseals (250 mg. each) once daily. Infectious diarrhea (white scours) of calves—2 Kapseals (250 mg. each) orally two or three times daily. Infectious diarrhea of colts and lambs—Colts—4 Kapseals (250 mg. each) once daily. Lambs—1 Kapseal (250 mg.) twice daily.

IN EYE INFECTIONS—When used locally, either as an aqueous solution or in an ointment form, Chloromycetin will penetrate an intact corneal epithelium and will not delay its regeneration.

professional literature available on request

Department of Veterinary Medicine

PARKE, DAVIS & COMPANY

DETROIT 32, MICHIGAN

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★ LUBRICATING ★ CLEANSING
★ GERMICIDAL ★ PROTECTIVE
★ DEODORIZING

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Ammonium lauryl sulphate is the active detergent with wetting, foaming, and emulsifying properties. Its activity is not affected by temperature or hardness of water.

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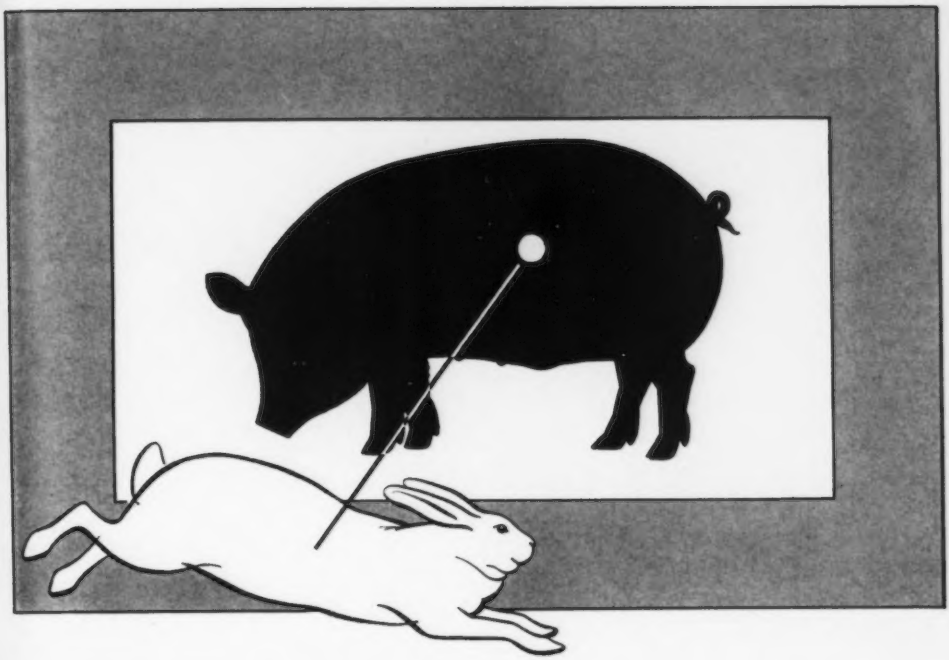

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